

ABSTRACT OF THE DISCLOSURE

The hydrogen sulfide contained in the raw gas is separated in a first treatment step by a microbial oxidation into water and sulfur. The methane contained in the raw gas is oxidized in a second and third cleaning step by a further microbial oxidation to methyl alcohol. The first cleaning step has a first sprinkling body-solid bed-device. The second cleaning step has a second sprinkling body-solid bed-device. The third cleaning step has a third sprinkling body-solid bed-device. The first sprinkling body-solid bed-device contains microorganisms which realize the oxidation from H_2S to sulphur. The second and third sprinkling body-solid bed-devices contain a mixed population of bacteriae and yeasts which realizes predominantly the oxidation of methanol. The washing water which exits the washing water sump of the third cleaning step is filtered in a filter press. The filtrate flows through a micro filter device and enters a distilling column. The distillation vapor is condensated in a condenser and the distillate is collected in a product tank. This distillate has a methanol content of 30-40 %.